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Is your call center up-to-date? If not, here is your opportunity

Nadji Tehrani. **Call Center Solutions**. Norwalk: Nov 1999. Vol. 18, Iss. 5; pg. 4, 3 pgs

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Full Text (2336 words)

Copyright Technology Marketing Corporation Nov 1999

Recently, I have had the pleasure to visit many call centers around the globe, and in my travels I have come to a startling conclusion: most call centers are obsolete. Although many times I was impressed with what I saw, I found time and again a long gap between the marketplace introduction of new technologies (which are designed to improve customer service, lower costs per customer contact and increase profitability) and their adoption by call centers - and this applied to both in-house call centers and those of outsourced teleservices agencies. I believe that one of the major causes for this is that the most productive call centers are thriving and as a result are blissfully unaware of the eminent and real danger facing them, that they are, essentially, the victims of their own success. In other words, they are so caught up in the successes of today that they are not looking to the future of business, which is now knocking loudly on their doors, anxious to move on.

Most call centers I have seen are not yet Web-enabled, and if they are, it is just on an elementary level, such as blindly answering calls generated by a toll-free number listed on a Web site. They are not doing what they really need to be doing in terms of getting involved with e-business and e-commerce. These call centers need to embrace the new, digital communication channel, because the Internet is here to stay. Consumers are crying out for service when they want it and through the medium of their choice. Call centers need to implement solutions that will give them the means to effectively manage multiple customer access channels, including the phone, Web self-service, e-mail, text chat and interactive voice response (IVR), and in the process build effective electronic customer relationships through the integration of these channels. And to build these electronic customer relationships, call centers need to have effective access to all customer information, no matter in which department it originated. Call center agents need instant access to all relative data regarding customer contact history as well as current information from sales and marketing on new pricing plans or marketing campaigns, so that a consistent, enterprisewide message is given to the consumer, no matter what the contact channel. Providing such information to your front-line agents is the first step in implementing an enterprisewide customer relationship management (CRM) solution.

~~Web chat and a "call-me" or "talk-to-a-live-agent" button~~ should be de rigueur on any e-commerce Web site, and call centers should be equipped to handle these transactions. Hand in glove with these technologies should be Web collaboration tools that allow the agent to push information to the online customer while maintaining their conversation. What is paramount when implementing these solutions is that agents should have all customer, product, company, etc., information available on their desktops when that customer makes contact with the company. This way, call center agents can not only quickly provide the answers and therefore offer more first-call resolution, but also have the information to offer the customer additional vital information or present upselling or cross-selling opportunities. CTI technologies have made such voice/data convergence a reality.

Also helping to define the call center of the next generation are remote agent technologies that allow flexibility in both the handling of calls and greater opportunities for retaining good agents in this tight employment market. As more multimedia PCs are making their way into homes and onto workplace desktops, and video kiosks are being introduced around the country, the ability for call centers to handle Internet telephony and video capabilities will soon be a must.

If your call center is not seriously investigating these new technologies, but is taking a "wait and see" attitude, you are falling behind technology, which means you will become less and less competitive and eventually may have to go out of business.

Is The Call Center Industry Suffering From Marketing Myopia?

In my opinion, the call center industry is definitely suffering from marketing myopia. If you recall, the railroad industry suffered from the same problem and it lost considerable market share to buses, airplanes, trucks, etc. Railroads somehow did not see these other alternatives as a threat to their business. Unfortunately, I think the bulk of the call center industry is not taking the impact of e-commerce and CRM seriously.

If you recall, in the early '80s, when this publication was first launched and laid the foundation for what is now the multi billion-dollar call center/CRM industry, most every company ignored our magazine's message that this industry must become automated. For years, many call centers insisted on manual operation until they started losing significant business to automated call centers. Then, and only then, they decided to adopt automation. This time around, however, the impact of e-commerce will be devastating if the call centers do not get involved and do it immediately. In short, the impact e-commerce will have on the call center industry will be one-hundred times greater than that of automation in the early to mid 1980s. In plain English, e-commerce may lead to your extinction if you don't act now. Is your call center one of the call centers that is lagging behind without being equipped with cutting-edge technology? If so, help is on the way.

Your Blueprint To Take Your Call Centers To The Next Generation

If you haven't already planned to attend CTP EXPO Fall '99 in Las Vegas, NV December 7-9, 1999, please plan now to do so. This is not a sales pitch, but a statement of reality. Here is how to get the most from your attendance at CT11 EXPO Fall '99 to take your call centers to the next level.

First, have the latest techniques and technologies explained to you by leading industry experts in our complete, noncommercial conference courses. Our Call Center Technology track features the following sessions: Web-based SelfService: Are You Driving In Forward Or Reverse?; Best Practices For Internet Call Centers; Purge Old Outbound Strategies For Real Success; Assembling A First Class Customer-Centric Help Desk; Reach The Core Of CRM Success: A Common Data/Knowledge Base; The Call Center Is The Natural Home For CTI; On The Road To Multimedia; Contact Management: Tips To Get On Base In Today's Ball Game; IP Telephony Uncenters The Call Center; Taking The Plunge Into E-Sales & E-- Service; Say What? Designing A Speech Recognition System That Works; and Skills-Based Routing: Better Service With Fewer People. If you feel you have expertise in any of these topics, we also will feature tracks on CTI Technology, Internet Telephony, Development, NextGen Services and Human Resources In The Call Center.

In addition to our complete conference courses, CTI(TM) EXPO will feature 6 free keynote addresses that will present the insights of industry luminaries representing leading communications vendors. The keynote speakers will be: Kevin Kennedy, senior vice president, Cisco Systems, Inc., Service Provider Line of Business; Alexander Gray, Internet Communications vice president, Lucent Technologies; Mark Christensen, vice president and general manager, Intel, Network Communications Group; John Hart, senior vice president and CTO, 3Com Corporation; Alan Anderson, president and CEO, Quintus Corporation; and Thomas Fitzpatrick, vice president and general manager of Carrier Data Networks, Nortel Networks.

Unsurpassed, Free Educational Opportunities Available On The Show Floor At CTI(TM) EXPO

I know that this, like many industries, can at times seem top-heavy with hype, but we aim to prove the old maxim, seeing is believing. The exhibit hall at CTI(TM) EXPO Fall '99 will present live, fully functioning exhibitions of the technologies I have just discussed, so you can see them in action for yourself. The first stop on your tour of the CTI EXPO Fall '99 exhibit hall should be the Live, Multimedia Blended Call Center sponsored by CellIT and its partners. This working call center was so popular at CTI(TM) EXPO Spring '99 that we had to bring it back for the fall show. At our spring show, more than 1,000 attendees observed agents at the Live, Multimedia Blended Call Center easily switch between inbound and outbound calls. All told, they had placed or received more than 11,000 calls (using both ATM and IP networking) in the two days the exhibit hall was open.

Your next stop should be the Office of the Future. The purpose of the Office of the Future is to put several technologies in one booth, in a simulated office environment, to give attendees an idea of what their early 21st-century CTI-- enabled office might be like. This event will feature companies representing many industry subsets, such as PC-- PBXs, unified messaging, video/data conferencing and collaboration, GUIbased call control, speech recognition, Web callthrough, network faxing, sales force automation, mobile/PDA technology, telecommuting and more. This booth will also feature technical staff from each of the participating vendors, along with TMC(TM) Labs engineers. We've also decided to link the Office of the Future to the CellIT Call Center to further our "see it for yourself " mission.

Now that you have seen the Live, Multimedia Blended Call Center and Office of the Future in action, it's time to move on to the Live CRM Demonstration. This demonstration, sponsored by Quintus, will feature a link between selected Office of the Future vendors and the CellIT Call Center, with demonstrations of this link being conducted at both ends. Everything you do at work all day is ultimately for your customers, and CRM is one more way to make the customer experience faster, better and more positive. The Live CRM Demonstration will showcase products and technology that enable CRM, with field sales, support and back-office stations

working in synergy.

Offering your customers more services is a valuable proposition for all call centers. Leading-edge services like converged billing and Internet fax are made possible through the use of IP telephony networks. Our Next-Gen Telco in a Booth will feature self-paced tours of the building blocks and enhanced services that comprise a nextgen telco. Each participating vendor will offer demonstrations, white papers and interoperability displays. This is your opportunity to see what new services these next-gen telcos have to offer your call center to help you get a leg up on your competition.

After seeing what next-gen telcos will have to offer your call center, you should stop by the Networked Home Pavilion, which is a centralized exhibition of today's manufacturers and service providers specializing in home networking products and services, including PC telephony solutions providers, home phoneline and wireless network manufacturers and structured wiring option providers. As the traditional call center applications of CTI and Internet telephony technologies become more affordable and applicable to other office settings, more and more companies - even home offices - can benefit from the tremendous cost efficiencies that these innovations make possible. You'll find these products and services demonstrated in this multivendor booth on the exhibit floor featuring industry products geared toward SOHO (small office/home office) technologies. The Pavilion will be sponsored by CurtCo Freedom Group.

While on the show floor, you will have an opportunity to observe the current state of interoperability among various Internet telephony products as demonstrated through the ConvergeNET network. The primary drawback to voice over IP so far is that many products don't interoperate well, if they interoperate at all. Industry groups are working on standards, like H.323, MGCP, SIP, RTP, etc., but these could take years to become ubiquitous. Also, some of these standards have various levels of compatibility; for example, some products are "more" H.323 compliant than others. So, ConvergeNET will be an overlay of the same network that runs to vendors' booths, with any vendor in the Internet telephony business welcome to participate. The network will consist of multiple zones, each featuring a gatekeeper vendor and several gateway and client vendors communicating with each other and with the outside world over a common TCP/IP network. Finally, rather than having one spot of the show floor designated as the ConvergeNET area, participating vendors will be given a sign to display at their main booth that indicates their ConvergeNET participation level (gatekeeper, gateway or client).

Our Fall '99 show will feature the fourth installment of our Learning Centers run by TMC' Labs engineers. A "Learning Center" is a place on the show floor, populated by a handful of CTI companies in the same subset of the business, where show attendees can go to ask technology-specific questions and receive answers that are guaranteed to be objective and technical, not sales/marketing fluff. Our previous three shows' Learning Centers were among the busiest parts of the show floor. Our topics for Fall '99 include CT Media, Development/Testing, Linux CTI, Next-Generation Call Centers, Network CTI and Wireless CTI.

Also while you are on the show floor, don't forget to stop by the Demo Theatre. There you'll see showcased about a dozen unique vendor presentations of the latest products on the market. And speaking of vendors, the exhibit hall will be packed with the widest selection of the latest technologies and services ever to grace a TMC(TM) exhibition.

After taking advantage of all the free educational opportunities outlined above and seeing the best new products and services the hundreds of vendors on the show floor have to offer, if you still have questions about improving your call center operations, we will provide you with the luxury of one-on-one access to industry experts at our Consultants' Corner. Here you can take advantage of some of the best minds in the industry to help you with any final questions you may have about the blueprint for your next-generation call center.

I encourage you to attend CTI(TM) EXPO Fall '99 not only as a self-- defense against a very potent, competitive threat, but also to ensure the prosperity of your call center by taking it to the next level based on authoritative, objective information. The next-generation call center is here. I look forward to seeing you in Las Vegas.

Sincerely,

Nadji Tehrani

Publisher and Editor-in-Chief

ntehrani@tmcnet.com

For information and subscriptions: call TMC(TM) at 203-852-6800; or fax to 203-853-2845 or 203-838-4070.

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Databases selected: Multiple databases...

University Sheds Boundaries with Telecom Network at New Camp

Facilities Design & Management nt. New York: Dec 1992. Vol. 11, Iss. 12; pg. 21, 1 pgs

Subjects: Telecommuting, Telecommunications systems, Systems development, Fiber optics, Colleges & universities, Case studies, Advantages

Classification Codes 9190, 9110, 8330, 8306, 5250

Locations: US

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Abstract (Article Summary)

Leaders of California State University (CSU) San Marcos and representatives of Pacific Bell and Northern Telecom Inc. are creating an advanced telecommunications platform (ATP) based on fiber optic technology that speeds integration of distance-learning applications for students in remote locations, as well as voice-to-text and text-to-voice translations for multilingual and disabled students. The 10-year ATP agreement between the 3 partners calls for Pacific Bell and Northern Telecom to create a research project team to assist CSU San Marcos in developing new applications that can be tested, evaluated, and used in the education market. The 2 telecom companies will also help the university pull together courses in telecommunications and internship programs for students. The heart of the network is a remote switching center inside a 10-ft. by 20-ft. concrete hub on campus. Fiber-based feeders branch out from the switching center to each building and between buildings.

Full Text (775 words)

Copyright Miller Freeman Inc. Dec 1992

Chicken wire is giving way to the copper and fiber optic variety in these rolling hills of North County, the suburban sprawl just north of San Diego. On the abandoned site of a chicken ranch within San Marcos' city limits, a highly sophisticated telecommunications infrastructure is coming together to support California State University (CSU) San Marcos, the first university built in the United States in nearly two decades.

Collectively challenged to "reinvent the educational process," leaders of the new university and representatives of Pacific Bell and Northern Telecom, Inc., are creating an advanced telecommunications platform (ATP) based on fiber optic technology that speeds integration of distance-learning applications for students in remote locations, as well as voice-to-text and text-to-voice translations for multilingual and disabled students.

TELECOMMUTING. Distance-learning could also hold down the number of students and faculty commuting to campus. State law aimed at cleaning up smog-shrouded urban areas is forcing public and private employers to restrict commuting and develop telecommuting programs.

But those are only a few applications of the state-of-the-art network. Students can create multimedia projects in a multimedia lab. A satellite earth station can both transmit and receive video broadcasts. CSU San Marcos could be the first university without physical boundaries. Its ultimate goal is "any time, anywhere, any subject" instruction, according to Bernard Hinton, assistant to university president Bill W. Stacy.

"We want students to be able to submit homework electronically and receive feedback in the same manner. We want students in their dorms or at home to be able to usually access all materials in the library. We want to use multimedia as an everyday fact of life, rather than a high-expense, special-use presentation," Hinton explains. "By doing this, we think we can enhance the learning experience tremendously."

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Hinton adds, "We don't want this to be just another demonstration site, and when the demonstration is over, everyone claps and goes home."

RESEARCH BASED. The 10-year ATP agreement between the three partners calls for Pacific Bell and Northern Telecom to create a research project team to assist CSU San Marcos in developing new applications that can be tested, evaluated, and used in the education market. The two telecom companies will also help the university pull together courses in telecommunications and internship programs for students.

The project is generating significant interest within both the telecommunications and educational communities because the network was planned and put in place from scratch. "Other campuses are looking at ways to retrofit to have comparable capabilities," Hinton says, "but their retrofit costs are higher than our total construction costs." Neither Hinton nor telecom representatives would give specific figures on the cost of the university's telecom applications and infrastructure. But Northern Telecom and Pacific Bell are providing some services and equipment free of charge or at cost because of the ground-breaking nature of the project.

The heart of the network is a remote switching center inside an inconspicuous 10-by 20-ft. concrete hut on campus. The center is linked to Pacific Bell's central office with a high-speed fiber optic trunk. Fiber-based feeders branch out from the switching center to each building and between buildings. Wiring and utilities between buildings are run through easily accessed ten-foot-high tunnels. "This is a very clean infrastructure," says Bill Robinson, the university's director of computing and telecommunications.

LIVE FROM THE LIBRARY. The first four campus buildings were dedicated in September; the network goes on line this month with 1,280 Centrex lines. Some 480 integrated services digital network (ISDN) lines go into service in January. When the campus is built out by 2010, the network will grow to support a full-time enrollment of 40,000 students and 4,000 faculty and employees.

ISDN lines are able to carry larger volumes of voice and data traffic more quickly between two points than conventional phone lines. Among its many applications, ISDN will support faculty and student access to the university's central database, interactive video learning, and information kiosks scattered throughout campus that hook into the central library electronic card catalogues and off-site databases.

To support use of video conferencing at modest cost, Pacific Bell will provide bandwidth-on-demand capabilities that will allow high-quality interactive video signals to be transmitted over conventional phone lines.

To expand the educational reach of students and faculty even farther, the campus's ATP will be a hub in a Knowledge Network that Pacific Bell is developing to unite Cal State's nine campuses and the University of California's 20 campus facilities. Dedicated T3 fiber-optic trunks will connect CSU San Marcos to two nearby community colleges, as well as the local library and school district. In the near future, phone lines criss-crossing the campus may even carry cable television.

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The next wave: Internet technology in the call center

Murray Bookman. **Call Center Solutions**. Norwalk: Jun 2000. Vol. 18, Iss. 12; pg. 72, 4 pgs

Subjects: Call centers, Web sites, Internet, Customer services, Guidelines

Classification Codes: 5250, 2400, 9190, 9150

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Abstract (Article Summary)

To meet growing customer expectations for multimedia interaction - and remain competitive - your company's call center operation must ride the wave of Internet technology change. Internet communication channels such as Web collaboration, Web callback, chat, e-mail and video kiosk are available today and fast becoming mainstream interaction channels. As a result, traditional "brick and mortar" companies are scrambling to Web-enable themselves. At the same time, Internet-centric businesses with a Web site, but no call center, are quickly finding that the human touch of live agents is essential to ongoing market expansion and customer retention. Guidelines are presented.

Full Text (1776 words)

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[Headnote]

To meet growing customer expecta

[Headnote]

tions for multimedia interaction - and remain competitive - your company's call center operation must ride the wave of Internet technology change. Internet communication channels such as Web collaboration, Web callback, chat, email and video kiosk are available today and fast becoming mainstream interaction channels.

As a result, traditional "brick and mortar" companies are scrambling to Web-enable themselves. At the same time, Internet-centric businesses with a Web site, but no call center, are quickly finding that the human touch of live agents is essential to ongoing market expansion and customer retention.

For your company to capitalize on the business opportunities made possible by the Internet - and migrate your call center to a multimedia contact center - you must first determine the degree to which you can leverage legacy systems versus embarking on a wholesale infrastructure rebuild. This process is known as "contact center engineering." Within this context, four principal areas need to be considered:

Whether core call center functionality such as ACD, IVR and CTI should remain premises-based as opposed to migrating these capabilities to the network;

A mechanism for establishing consistent business rules for contact handling across multiple channels;

Reevaluating your deployment of related applications such as workforce management (WFM) and customer relationship management (CRM) in a multimedia environment; and

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Ensuring that contact center reporting and analysis capabilities keep pace as new interaction channels are introduced.

Contact Center Engineering

The traditional call center infrastructure includes ACD, IVR and CTI platforms as well as interfaces to backoffice resources such as databases and to front-office applications such as CRM. In most cases, this infrastructure was not engineered up-front as a collective entity. Rather, various systems were brought together over time as a business introduced new technologies to reduce costs, improve customer service or both.

For example, communication between most ACD and IVR systems has been achieved via proprietary interfaces, APIs and messages, rather than through a common architecture. Likewise, the harsh reality of CTI is that data and voice were never designed to coexist; they have been made to work together only through significant development efforts over the past several years.

The advent of the multimedia contact center offers businesses a unique opportunity to rationalize and define the overall blueprint for customer interaction. Let's examine some of the more significant areas for consideration as your traditional call center migrates from standalone voice and IVR silos to multiple channels across multiple locations.

Premises Versus Network

Overall, premises-based contact processing platforms are today being out-manuevered by network-based solutions and deployments. As new media types are brought into the call center, as voice and data silos give way to an enterprise architecture and as agents become skilled in multiple channels, the traditional premises-based approach to ACD and IVR becomes cost-prohibitive and presents scaling challenges. For instance, when a legacy ACD or IVR is used for multimedia queuing, a dedicated port is required for each customer interaction. As Web chat, Web callback, Web collaboration and other Internet media are introduced, the transaction volume for agents skilled in multiple channels increases accordingly, requiring significantly more queue ports. Thus, Internet-based customer contact is driving the adoption of network-hosted ACD and IVR capabilities to ensure scalability and to deliver multimedia, enterprisewide prompting, routing and processing of customer contacts.

Likewise, network CTI moves the traditionally premises-based qualification and routing components of CTI to the network level, leaving only the screenpop and agent telephony functions with a premises-based application. To determine call treatment, network CTI combines network-based qualification and routing - including real-time ANI lookup and prompting on a per-call basis - with real-time visibility into multiple agent queues across multiple locations.

Going forward, network CTI will provide qualification and routing across multiple contact channels from a network-based platform. As IP rapidly becomes the network protocol of choice, the voice/data integration complexities of the past will be eliminated. Results will include the seamless integration of IP-centric applications, unified back-end integration and reusability across multiple contact center platforms.

Consistent Contact Handling

As the traditional call center migrates to the multimedia contact center, companies should expect increased demand for select media types such as e-mail and Web collaboration, as well as a melding of delivery channels. For example, a Web chat session can move quickly into Web collaboration with the sharing of Web pages between agent and caller. Even more dramatic, Web collaboration and voice interaction can be initiated from email sent to prospects and customers simply by including an appropriate link.

As customers increasingly expect to interact with your company via the channel of their choosing - and in some cases, via multiple channels during a single session - decisions must be made about database deployment and architecture. Traditionally, the call center has maintained a customer-profile database to support real-time profiling, treatment and routing of voice calls and IVR transactions. Data points typically include customer identification, transaction request identification, products and services previously purchased, cross-selling and upselling opportunities and "red flags" such as a collections or potential fraud situations.

As new contact channels are introduced, you will need to decide whether it makes better business sense to maintain niche databases by media type or a general-purpose data repository across channels. Decision criteria should include the volume of transactions by media type as well as your response time/service level objectives by type. For instance, while voice calls typically need to be profiled and routed in less than 250 milliseconds, e-mail does not have this real-time constraint. Also, don't forget the architectural and support ramifications of maintaining a separate database for each channel versus the economies of scale made possible by a single, enterprisewide, multimedia profiling solution potentially comprised of media-specific data repositories when needed.

Customer Relationship Management/Workforce Management

E-CRM is rapidly emerging as a key component of customer contact strategy, especially as it pertains to customer lifecycle management. To ensure success in a multimedia, enterprisewide contact center environment, a solution must support real-time profiling for qualification, routing and treatment based on up-to-date information housed in a common data repository. As the multimedia contact center takes hold, businesses have the opportunity to rationalize and reengineer the disparate profiling techniques and approaches to information storage, access and retrieval that have arisen across their IVR, ACD, CTI and CRM applications.

Likewise, WFM deployments need to be reevaluated based on their ability to address multiple media types and multiskilled agents spread across a broad range of facilities, including traditional call centers, branch offices, home offices and service agencies.

Reporting And Analysis

It is critical that your contact center engineering process includes an evaluation of reporting and analysis capabilities early on in the overall technology design. Industry-standard, nonproprietary, real-time and historical reporting tools including OLAP and DataMart should be made available to your business end users. Data points provided should include all key information per interaction such as start time, contact media channel(s), customer segment, agent identifier, contact center location, transaction types) and time per delivery channel/agent. Ultimately, the data provided by the reporting/analysis application will enable you to generate business metrics including acquisition cost, percent retention or loss, cross-selling, upselling and channel performance.

Contact Center Architecture

Once you have addressed the issues reflected in the contact center engineering process, you will need to assess the infrastructure implications of the decisions you have made.

As mentioned earlier, the customer contact network will increasingly be IPbased for all media types including voice. This means that real-time, multimedia qualification can now take place at a single point in the network with realtime routing to your entire base of live agents and other answering resources. Likewise, staffing models for forecasting and adherence reporting can now address more media types and a larger pool of distributed personnel. Finally, service levels can be dramatically improved and costs reduced by using resources across your entire enterprise.

The enterprise can also be dramatically expanded through the ubiquity of the IP network and the standards-based nature of IP applications. Going forward, the multimedia contact center can easily include traditional "brick and mortar" contact centers; e-centers that handle e-mail, chat and fax transactions but do not provide voice contact; branch and regional offices; home agents; service agencies; and even field personnel via wireless voice services. In terms of applications, a service agency can be used for overflow and niche campaigns while a branch office with a non-tollfree number can provide local presence and personalization. Calls coming into the branch can be routed to the formal contact centers during off-hours. Likewise, toll-free calls initially routed to the contact centers can be overflowed in real-time to branch and regional offices during peak periods.

Not surprisingly, these various nodes entail infrastructure differences in such areas as bandwidth and back-end integration - sometimes even by media type! For example, voice and multimedia contact centers typically have excellent bandwidth and good back-end systems integration, while branches may have lower bandwidth and more limited back-end integration. Alternatively, your regional offices may have been overhauled and now have better multimedia capabilities than your traditional call centers that have not yet been multimedia enabled.

Next Steps

Develop a comprehensive plan for implementing your multimedia contact center enterprise, including a roadmap for technology upgrades. For instance, decide if you will rapidly deploy the new technology at one location initially on a test basis, or if it makes more sense to migrate the entire current infrastructure over a defined period of time. Making sure the contact center plan is consistent with your company's overall business objectives will help to answer these questions. Also, remember that the plan is a "living, breathing" document - don't be reluctant to make modifications as changes occur and information is obtained.

Establish an interdisciplinary project team with a demonstrated track record. Be sure to include contact center agents - the people who will ultimately implement the plan! Equally important, secure management commitment up front for your new initiative.

Manage And Measure

Establish metrics specific to your company and a corresponding cost/benefit analysis model. Tie the contact center project to sales and marketing objectives and demonstrate results. Ensure that your plan is not merely a cost-reduction initiative, but is firmly tied to fundamental change. Finally, audit the plan, both during the project and post-implementation.

Start by evaluating your current technology infrastructure honestly. Remember - it may have developed organically, but now you have the opportunity to truly engineer the new infrastructure. Do it right, and your business can begin reaping the customer loyalty and profitability benefits that come with riding the Internet wave.

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Abstract (Article Summary)

Customers want better access to the companies from which they buy products and services. This paper reviews how companies have responded to this demand for easy access. It looks at the past, present and future information needs of the customer and how they have been met, and touches on the developments in the communication channels available to customers. Some simple usage statistics are provided. Forecasts regarding the future technological developments which will once again change the kind of access and information available are provided.

Full Text (3377 words)

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Introduction

Customers have always wanted better access to the companies from which they buy products and services. My purpose in this paper is to review how companies have responded to this demand for easy access. In this process, I will review customer contact behavior in the past, summarize what is happening in the present, and forecast what might be important as we move into the future and the new millennium. All companies are witnessing a globalization of their market space combined with a more information-hungry customer with more sophisticated pre-purchase and service information needs.

In setting the stage for the discussion herein, it is important to begin by understanding why customers want, need, and even demand access to companies with whom they do business. A customer's desire for contact, or access, with a company, can easily be summarized by the following four very basic information needs:

(1) The customer has a question and needs an answer in order to proceed, i.e. "Where do I buy your product?", "What is the price?", etc.

- (2) The customer wants the company to do something, i.e. "Change my address", "Send me a manual", "Take my order for a new product", etc.
- (3) The customer has a problem with the product and needs assistance and guidance in resolving the issue, i.e. technical support, help desk, etc.
- (4) The customer is emotionally upset with the product, and wants to know that the company will set the situation straight, i.e. complaint resolution and anger diffusion.

As I proceed through this paper, it will become evident that, whereas the number of different channels (also called customer "touchpoints") open to the customer to reach the company have exploded, the reasons for customers contacting companies are still the same basic four listed above. By the way, all four customer needs can be rolled up into one word and that is "accessibility". From the research we have done, accessibility is the new corporate battleground. In the years to come, if you can be the most accessible company in your space, it will mean that you will literally "own your market". More on this later.

Some examples of the continually evolving, and technologically diverse channels for customers to reach out and "touch" companies include the following:

- mail delivered by the Post Office;
- telephone, both toll and toll-free;
- electronic mail (e-mail);
- facsimile transmission (fax);
- fax-back (self-service fax);
- voice response unit (VRU);
- Interactive voice response (IVR);
- electronic data interchange (EDI);
- automatic teller machine (ATM);
- **kiosk**;
- internet (corporate Web sites);
- voice over the Internet (cyber calls);
- chat groups on the Internet;
- telephone bridges with hundreds of trunk lines;
- loyalty cards; and
- voice mail.

The **customer service** call center has been the primary focus in the last ten years, but with the new channels of customer contact evolving, the call center is transforming into the company's "access" center for all customer interactions.

So, to summarize my introduction, I think we can safely say that there is a globalization of customers with the same basic needs for access to information. In addition, we have an exploding array of customer access channels, and we have the major challenge of integrating all of these potential customer touchpoints in a seamless and intuitive fashion for our customers. Let us begin by having a brief look at the last 20 years to see if we can learn anything from the experiences of the past in better directing customer access management in the future.

The past

Managing customer contacts has evolved logically through the following phases of major channel availability:

- (1) face-to-face customer contacts;
- (2) correspondence delivered by the Post Office;
- (3) the telephone with toll calls;
- (4) the telephone with toll-free calls;
- (5) facsimile transmission of correspondence;
- (6) e-mail correspondence; and
- (7) the Internet and corporate Web sites (Figure 1 shows the evolution of some key customer access channels).

The lessons we can learn from the past are:

- (1) Customers greatly value free and easy access to mission critical information.
- (2) When new channels become available, companies are quick to offer them, but not so quick to staff them properly to handle the "flood" of customer contracts. Witness the blocked calls when 800 numbers were first offered, and the lack of response to e-mails in more recent times (see more later).
- (3) The addition of new channels does not replace existing channels of access to information. Customers prefer multiple touchpoints available at any time and for free.

The present

Currently, companies in most industries are moving their existing low-tech **customer service** call centers from back office support to the front-line of the enterprise. In this migration, the call centers are being outfitted with the latest in high-tech hardware and software in both voice and data applications, and in addition, the focus is moving from mostly telephone calls to all forms of customer access including e-mail, fax-mail, **kiosk**, and the Internet. As mentioned earlier, multimedia customer "touchpoints" are evolving rapidly, and therefore the call center of the present is fast becoming the "customer access center" of the future. From estimates produced by analysis of data stored in the Purdue Benchmarking Datamart, the current distribution of customer-to-business contacts is shown in Figure 2.

Driving this customer access center development is the growing awareness that managing customer relationships is a key driver of bottom-line profits. Today's customers greatly value timely accessibility; in fact, the vision of the customer access center of the future is to allow customers access to information:

- at any time;
- from anywhere;
- in any form; and
- for free.

This ease of customer access is fast emerging as the critical element of a global customer relationship management (CRM) strategy. In the not too distant future, customers will deal preferentially with those companies that are deemed to be the most accessible. Even CRM can easily be defined in terms of access to information: "CRM is the seamless accessibility by internal and external customers to their mission-critical company information by the integration of a company's telephone system, Web site, and e-mail touchpoints resulting in satisfying customer self-service for initial product purchases, followed by targeted intelligent up-sells and cross-sells, and finally the creation of customer loyalty, value, and profitability."

As the "lightning rod" for customer interactions, world-class access centers are the single point of contact for customers. According

to research conducted at [Purdue University \(www.e-Interactions.com\)](http://www.e-Interactions.com), over 50 percent of customer interactions will occur through the call center and the Internet by the year 2000. Fueled by tremendous advances in the integration of telephone and computer technologies, the access center has the potential for being the company's most potent weapon for maintaining long-term customer relationships.

For many companies, global competition has reduced products to mere commodities that are difficult to differentiate through features, functions, or price. Having reached parity, where price and quality are the "table stakes" of doing business, the paradigm shift is definitely towards customer accessibility. Executives are beginning to recognize the potential of the call center and teleweb center as a significant revenue generator, perhaps one of the surest investments they can make in enhancing and creating customer value and bottom-line profits. Return on investments made in customer accessibility is seldom less than 100 percent in the first year, and frequently even more if customer lifetime value is included in the equation.

The cost and performance of a customer access center can be critical to its success. From reviewing the industry data, one can conclude the following: "Spend too little and perform poorly, and your call center becomes a business liability that consistently drives away customers and creates market damage. Conversely, spend too much and over-perform, and your call center again becomes a financial loss to the company. If you spend efficiently and perform effectively at a level just better than your competitors, your call center will most likely be a profit center for the company, i.e. getting, growing, and retaining customers."

Herein lies the challenge and the primary reason to benchmark your accessibility metrics against not only the best-in-the-world, but also your most direct competitors, i.e. best-in-class. Currently, the most comprehensive study on customer access center performance is the Purdue University Benchmark Datamart with over one million data points on worldwide center performance issues. For more information, visit the Web site at: www.e-Interactions.com

The future

As we move into the new millennium, many issues are impacting the customer access center. Customer demand for easy access to information is increasing rapidly, and simultaneously technology solutions are springing up everywhere to assist center managers to improve their ability to handle the new levels of demand by information-hungry customers. Considering the trends in customer behavior regarding access channels, I would forecast the future distribution of contacts to be as in Figure 3.

For many companies, just re-engineering their infrastructure to handle the new and rapidly growing channels of e-mail and the Web will consume all of their budget and staff for the next two years.

In the sub-sections that follow, I have highlighted what, in my opinion, are the top strategic solutions that will drastically change the customer access center of the future.

Voice of Internet protocol (VOIP)

In the future, Web-enabled centers will allow a customer to visit a Web site, enter the key data typically asked for by the **customer service** agent at the beginning of a call, and to then place the call via the Internet instead of over traditional phone lines. New technology will also allow the customer to see the **customer service** representative that they are dealing with through the Internet. This brings back the feeling of personal **customer service**. This futuristic call center will enjoy the luxury of correct information provided directly by the customer, reduced talk times, shorter average speed to answer, and superior **customer service**.

Further advantages of VOIP are:

- the agent can see where on the Web site the customer has already been;
- the agent views the same screen that the customer has on their desktop;
- the agent can move his/her cursor on the customer's screen for giving specific directions; and
- the agent can "push" additional pages of information directly to the customer's desktop for discussion, education and selling.

VOIP will drastically change the customer access center of the future.

IVR and voice recognition

When you call most businesses today, the first thing you hear is an IVR, not a **live** person. IVRs are the interactive recordings that allow the customer to make selections to route them to the specific **customer service** representative who will most likely be able to

provide them with the special information that they seek. While there has been much controversy over the automation of **customer service** the benefits clearly outweigh the drawbacks for both the customer and the provider. Recently, IVR technology has moved from just being a fancy answering machine to a full fledged **voice recognition** system, where the computer provides a very realistic "conversation" with the caller.

The new **voice recognition** equipped IVRs now have the capability to convert text-to-speech with a large vocabulary of speech recognition. Our research studies indicate that customers prefer "speaking to" the IVR system rather than keying in their selection with the keypad on the telephone. IVRs can also provide Web callback, fax back, and look-up features. In Figure 4, I am forecasting a major increase in the use of IVR for self-service now that customers can actually "talk to" the computer.

Figure 4 shows that IVR usage had reached a plateau of about 38 percent of calls handled in the years before the introduction of **voice recognition** IVR systems. After the new voice-based technology was introduced this year, the growth of customer self-service could go over 70 percent.

Database engines and knowledgeware

Database marketing allows you to focus your offering to the individual customer and to provide enhanced **customer service**. To retain high value customers, you are able to provide the customers with the specific services that they want. For instance, it would not add customer value to try to "sell pampers to a bachelor". This requires a great deal of quality information about the customer that may reside in several different systems like billing, shipping, and call center databases. The best way to manage all of this data is to store it in a data warehouse. A data warehouse is a database system built to store mass volumes of historical data for fast analysis and reporting.

The data stored in a warehouse is a conglomeration of data entered into each of the different systems a company may have. Too often the data stored in a warehouse are hard to extract for customer analysis and profiling. Data mining allows you to logically group customers according to specific characteristics that will allow you to provide specialized or enhanced **customer service**.

Many of the electronic commerce operations currently doing business via the Internet rely on data mining to keep the customer current on new offerings based on their historical buying patterns. ^①Amazon.com, the largest reseller of books on the Internet, currently employs this data mining strategy. This is done by not only analyzing the purchases made by the customer but by also analyzing the purchases made by other customers with similar interests or purchases. With all of this information gathered on the customer, the class and level of service can easily be prioritized based on the history and value of the customer.

E-mail management software

E-mail continues to be a customer favorite for contacting companies, yet companies are only reluctantly building the response systems for these e-mailed customer contacts. In Figure 5, it can clearly be seen that even when the customer's e-mail gives a clear "buy signal" 32 percent of the companies never responded at all.

And again, in Figure 6, it is even more clear that companies do not respond to an e-mailed complaint in 47 percent of the cases.

Not to worry though, help is on the way. There are now ten or more companies that offer e-mail management and automation software that will greatly automate the e-mail handling process, and also give the customer the 24-hour (or less) response time that they expect. In fact, if we compare mail sent through the Post Office, as compared to mail sent by e-mail, and handled by some of the new e-mail management software, I predict that the cost will decline significantly (see Figure 7).

Typically, the cost to handle a letter sent through the Post Office is about \$30 when all the handling costs are included. In Figure 7, the cost inflection is the mass introduction of e-mail management and automation software. E-mail has the tremendous advantage of handling customer issues asynchronously, thereby allowing more time to send the customer's e-mail to the one individual most able to handle it. Plus, customers are much more willing to wait as much as 24 hours for a complete response.

Value-based caller routing

Companies are learning to both segment their customers based on value, and to segment their front-line agents based on call handling skills. Value-based segmentation allows you to route the call without going to the queue if it is a high-value customer. For instance, with the airline that I fly most (over 100,000 miles per year), if I call from my home or office telephone, they obviously know and recognize my number (through ANI), and send me to a live agent with no waiting in the queue. If I go down the hall and use a pay-phone, the number is not recognized, and I am immediately in a long queue waiting for the next available agent. This is an example of value-based routing.

Skills-based routing allows you to have specific customers handled in the time you specify and by the **customer service** agent with

the correct call handling skills and knowledge. Skills-based routing is not a new concept in the call center industry, but when combined with value-based routing, i.e. routing your most valuable customers to your best agents, the combination can be a powerful new strategy to keep and grow your best customers.

Computer-simulated training

The days of standard classroom training have been replaced by computer-based training (CBT) and Web-based training (WBT), and now the very latest technology called simulation-based training (SBT). SBT takes computer-based training a step further by providing training on the complete customer transaction. The ideal new hire in a call center would be one that has all of the experience of your best **customer service** agent. SBT now allows you to do this by training your future agents using actual call examples. This replaces the role-playing used in many training programs. Role-playing used to be the only way to see how the representative would react to different customer situations.

The SBT training modules are easy to create and administer. They allow the **customer service** agent to complete a self-evaluation and to review the areas in which they were not comfortable. This also allows the **customer service** agent to learn at their own pace. Some new hires will pick up skills quickly, while others may take a little longer to grasp all of the complex concepts involved in effectively handling calls.

Computer telephony integration

Computer telephony integration (CTI) combines ANI (automatic number identification) and DNIS (dialed number identification service) to retrieve the calling customer's record from the corporate database, and then provide the agent with a "screen pop" that identifies the caller and fills the screen with the essential information. This allows for the automated processing of complex customer transactions while integrating multiple call center technologies. The benefits of CTI are very clear. The agent saves time by not having to ask the customer for basic information at the beginning of the call, nor does the agent have to ask the customer what their previous calls were all about. CTI provides a "screen pop" of caller information to the agent simultaneously with the call (i.e. voice and data transfer). This allows your agent to focus on the customer and to provide more superior **customer service**.

Middleware

Perhaps the most critical and undervalued segment of your company's technology infrastructure as you move towards enterprise-wide access to information is likely to be a layer of software known as middleware. When it comes to integrating corporate information from disparate databases that were not necessarily designed originally as compatible data sources, middleware can provide the magic key. This middle piece of the technology is currently unfashionable, known by technology vendors, rather unflatteringly, as the "plumbing" that enables information held in different formats to be integrated and presented to the call center agent in a consistent format. Middleware acts as a smoothing layer or bridge across databases, breaking your front-line agents out of scenarios such as "I'm sorry, that information is in our sales ledger, and I do not have access to that database from here" - the kind of scenario that frustrates customers and sends them elsewhere.

Conclusions

For many companies, all work in recent months on customer accessibility has been thwarted by the focus on fixing the Y2K bug(s), and preparing for the changeover on December 31, 1999. As the new millennium kicks-off, and the information technology departments can re-focus their budgets, energy, and talents, many companies will select customer accessibility as the ripest area for improvement with the largest return on investment.

The basic changes that I see in the customer access center evolution are all of those listed in Table I.

As companies make the transition from a product-only focus to a customer focus, the interface technology that brings customers closer to the company to share information, and allows companies to more clearly focus on a customer's specific needs will make the customer access center of the future a company's prime weapon to get, keep and grow customers.


[Illustration]

Caption: Table I.; Customer access center trends; Figure 1.; The evolution of some key customer access channels; Figure 2.; Customer-to-business contacts in 1999; Figure 3.; Customer-to-business contacts in 2002; Figure 4.; The percentage growth of calls handled by IVRs; Figure 5.; Response time to a "buy signal" sent by e-mail; Figure 6.; Response time to a complaint sent by e-mail; Figure 7.; The cost in dollars to handle customer mail

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Custom service enhancers

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One of the primary themes of this year's VoiceCon 2000 conference was web-enabling the call center, or more correctly, the "customer contact center." Businesses are striving to make themselves easier to do business with: facilitating access to their websites; using a website as the gateway to direct customer contact (i.e., by voice, text-chat, e-mail); monitoring website visitor behavior to learn more about the buying process; and converting casual website browsers into buyers.

This only makes sense: Web access typically correlates with a more "upscale" customer, obviously computer literate, and perhaps with a bit more disposable income burning a hole in her pocket. But doing it right demands a big change in how customer contact is managed. Businesses must become as interactive as possible - capable of managing incoming contacts in multiple media, from multiple points of entry; doing so consistently, and through a consistent interface.

Two companies, one offering a service and one offering a product, are moving to become leaders in "enabling" better customer proximity. Their offerings are designed to exploit the website and making it more interactive.

First, the service. !hey Software Inc. (North Andover, MA - Boo-233-7997. www.heyinc.com) hosts and maintains an "interaction center" service that facilitates live help between customers and a company's support resources - the latter not necessarily limited to call center agents. These company resources could also (or in part) be defined as analysts, engineers, or sales and marketing staff who are particularly suited to handling specific caller inquiries.

Here's how the !heycenter works. It is the point at which subscribers (businesses wanting to be more responsive and sell more) and their prospective/actual buyers converge. For example, "e-Company X" subscribes to !heycenter's services. !hey establishes a unique URL, provides visual design tools and support to customize the URL for e-Company X, and puts a !hey button onto X's website, using !hey-provided Java and HTML templates.

X's support employees use their standard browser to log into the !heycenter URL. When the customers browse X's website and see something they want to know more about, they click the button, are transferred to e-Company X's personal URL at the !heycenter (that's how !hey's server knows which client's customer is requesting assistance), and are connected by the service with preselected staff or resources at eCompany X's own facility, or elsewhere.

The !heycenter supports traditional and emerging access methods. Live voice, interactive voice response (IVR), and VoIP are supported by the !heycenter's proprietary voice servers. These accept inbound calls/connections and reoriginate them to regular phone numbers (e.g., for remote workers at arbitrary locations) or to extensions behind the client's PBX. (release r of the product requires destination extensions be accessible by DID direct-dial - future releases will be able to navigate through auto-attendants, etc.)

These voice-oriented contact services are aimed at centers under 100 seats. Emerging access methods, such as instant messaging (text chat) with customers or internally, voice chat (sending recorded messages between agent and caller in nearly real time), collaborative browsing, and email, are also supported. !heycenter routes contacts based on caller history or call context (e.g., sites

visited, touchtones pressed, business rules, etc.) Other capabilities include skills-based routing, multiple queues for call prioritization, scripting, multi-access routing, and, for now, a base set of about a dozen reports. Customizable reports will come later.

They's hosting services are a new kid on the block. They started offering the service in February, on a "limited availability" basis, and already has a handful of paying customers. Initial customers are phasing in the service, affording contact with limited pools of between five and 25 agents. General availability is scheduled for March. Pricing for the hosted services ranges from \$250-\$500 per seat/month, depending on which types of access channel a client requires.

To access They contact services, web customers need Netscape Navigator (2.02 or later) or Microsoft Internet Explorer (3.02 or later). If callers want to use voice chat, they must have Windows (95, 98, NT 4.0, or 2000 and Microsoft Internet Explorer 4.01 [SP2] or later). Agent, supervisor, and site administrator work stations must be equipped minimally with Pentium-class, i33 Mhz processors, 64 MB RAM, 1024 x 768 color display, 56 Kbps connection, Windows 95 or higher, and Netscape Communicator 4.61 or later or Microsoft Internet Explorer 4.01 (SP2) or later. The Theycenter data center provides and supports all server hardware and software.

In this highly-charged world of "dot.coms" and increasing attention to pleasing customers, They seems to have found a unique way to deliver emerging web-enabled capabilities to clients. By outsourcing the hosting and server maintenance functions, They appeals to organizations that want to focus on their customers, rather than fuss with the technological issues of a web-enabled call center.

The second company under this month's spotlight is Picazo (San Jose, CA -408-383-9300, www.picazo.com) and its "human-enabling" web technology, produced by subsidiary NetACD, purchased from Compaq in January. By this acquisition, Picazo adds to its stable of server-based, voice-related capabilities and solidifies its strong market position in server-based PBXs. Besides providing a good complement of ACD and reporting capabilities, NetACD is designed to personalize the "faceless interaction" between a company and its customers.

NetACD comprises five distinct components:

- * NetACD Agent Software supplies the basic communications capabilities and interfaces with the agents work station. The minimal work station specs are a iG6 Mhz Pentium machine equipped with 32 MB RAM, 5 MB of spare disk space, 56 Kbps connectivity (T1 or LAN speeds are better and preferred), full duplex sound card, speakers, microphone or headset, video capture capability and camera, Windows 95 or NT, Internet browser (Internet Explorer 3.02 or higher), and Microsoft NetMeeting installed and configured.
- * NetACD Configuration Manager interfaces with the ACD "guts," including agent and group profiles, call tracing and logging, and the call processing information from NetACD Call Manager (see section below).
- * NetACD Call Manager initiates and tears down calls, syncs voice and video, performs authentication duties, controls call treatment, and manages data sharing in applications.
- * The NetACD Queue component is used when multiple agents will handle multiple customer contacts. This manages the contacts on a FIFO basis and allows customers to view video information, queue status, and expected wait time.
- * Finally, the Management Reports component provides flexible customized reporting. The reports are text and graphical and provide the expected range of information.

A key capability of NetACD is its ability to support voice and video sessions with the call center. Of course, the company needs to ensure that agents (and office backgrounds) are presentable, but the caller need not have a camera and can remain anonymous. Quality of transmission is a direct function of the connection speed, work station speeds, and processing capabilities for agents and callers. If the quality is not satisfactory, then a chat session may be invoked at the click of a button. H.323 issues need to be considered when planning for NetACD implementation. H.323 is usually blocked by firewalls, but if the company wishes to unblock H.323 communications or place the agents outside the firewall, then video communication is possible.

Picazo recommends a low usage or dedicated NT server, but traffic must be engineered and anticipated to configure the server properly. A high level of video streaming requirements can also hamper server performance.

Kiosks and Intranet call center applications (e.g., in-house tech support, help desk, etc.) are two initial target applications. The latter are especially useful to study the effects of voice and

video sessions and can serve as a "proof of concept" trial. While the technology to support simultaneous voice and video connections for contact center callers has been around a while, now is a good time to be thinking about implementation. The onslaught of advertising for "e-business" is making a dent with the general populace, and broadband rollouts will improve connection quality.

Both products are harbingers of things to come, and they could be the differences that strike a browser's fancy and turns him/her into a buyer. [Editor's Note: For more info on web-centric customer contact solutions, see our "CRM for Dot.Coms" feature, this issue.]

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